

1 ABSTRACT OF THE DISCLOSURE

2 The invention comprises FLASH memory and methods of forming
3 flash memory. In one implementation, a line of floating gates is
4 formed over a semiconductor substrate. The semiconductor substrate is
5 etched to form a series of spaced trenches therein in a line adjacent
6 and along at least a portion of the line of floating gates. At least one
7 conductivity enhancing impurity implant is conducted into the
8 semiconductor substrate at an angle away from normal to a general
9 orientation of the semiconductor substrate to implant at least along
10 sidewalls of the trenches and between the trenches, and a continuous
11 line of source active area is formed within the semiconductor substrate
12 along at least a portion of the line of floating gates. In another
13 implementation, a line of floating gates is formed over a semiconductor
14 substrate. An alternating series of trench isolation regions and active
15 area regions are provided in the semiconductor substrate in a line
16 adjacent and along at least a portion of the line of floating gates.
17 The series of active areas define discrete transistor source areas
18 separated by trench isolation regions. A conductive line is formed over
19 the discrete transistor source areas and trench isolation regions
20 separating same adjacent and along at least a portion of the line of
21 floating gates. The conductive line electrically interconnects the discrete
22 transistor source areas. Source forming conductivity enhancing impurity
23 is provided into the discrete transistor source areas. Other
24 implementations are contemplated.